Claims

What is claimed is:

1. A gray water collection system, comprising:

a main drain line;

one or more black water sources connected to the main drain line;

one or more gray water sources connected to the main drain line; and

a collection valve located down stream from at least one of the one or more black water sources, the collection valve having (i) an inlet connected to the main drain line, and (ii) an outlet connectable to a black water drain line or a gray water drain line.

2. The system of claim 1, further comprising one or more gray water sensors configured to detect water flow from a respective number of the one or more gray water sources.

3. The system of claim 1, further comprising one or more black water sensors configured to detect water flow from a respective number of the one or more black water sources.

4. The system of claim 3, wherein the one or more black water sensors communicate water flow detection to the collection valve using electrical signals.

5. The system of claim 4, wherein the one or more black water sensors communicate water flow detection to the collection valve via a wire.

6. The system of claim 5, wherein the one or more sensors communicate water flow detection to the collection valve using a wireless signal.

7. A gray water collection system, comprising:

a main drain line;

one or more black water sources connected to the main drain line;

one or more gray water sources connected to the main drain line;

one or more black water sensors configured to detect water flow from the one or more black water source, each of the one or more black water sensors comprising:

a detector operable to detect the flow of water from the black water source; and

a transmitter for transmitting a black water event signal when black water flow is detected; and

a collection valve having (i) an inlet connected to the main drain line, (ii) an outlet connectable to a black water drain line or a gray water drain line, and (iii) a signal input for receiving the black water event signal from the one or more black water sensors;

wherein, responsive to the reception of the black water event signal, the outlet of the collection valve switches to, or remains connected to, the black water drain line.

8. The system of claim 7, wherein the collection valve is located downstream from the one or more black water sources.

9. The system of claim 7, wherein the one or more black water sensors communicate the black water event signal via an electrical signal.

10. The system of claim 9, wherein the electrical signal is sent via a wire.

11. The system of claim 9, wherein the electrical signal comprises a wireless signal.

12. The system of claim 7, further comprising:

a collection valve sensor, comprising:

a detector configured to detect water flow at the inlet of the collection valve; and

a transmitter operable to transmit a water flow event signal upon detection of water flow into the collection valve,

wherein, responsive to the reception of the water flow event signal, and wherein a black water event signal has not been received, the outlet of the collection valve switches to, or remains connected to, the gray water drain line.

13. The system of claim 7, wherein the collection valve sensor communicates the water flow signal via an electrical signal.

14. The system of claim 13, wherein the electrical signal is sent via a wire.

15. The system of claim 13, wherein the electrical signal comprises a wireless signal.

16. The system of claim 7, further comprising one or more gray water sensors configured to detect water flow from the one or more gray water sources, each of the one or more gray water sensors comprising:

a detector operable to detect the flow of water from the gray water source; and

a transmitter for transmitting a gray water event signal when gray water flow is detected,

wherein, responsive to the reception of the gray water event signal, and wherein a black water event signal has not been received, the outlet of the collection valve switches to, or remains connected to, the gray water drain line.

17. The system of claim 16, wherein each of the one or more gray water sensors communicates the gray water event signal via an electrical signal.

18. The system of claim 17, wherein the electrical signal is sent via a wire.

19. The system of claim 17, wherein the electrical signal comprises a wireless signal.

20. In a water collection system having one or more gray water sources connected to a main drain line, and one or more black water sources connected to the main drain line, a method for collecting gray water, comprising:

connecting on the main drain line and down stream from at least one of the one or more black water sources, a collection valve having (i) an inlet connected to the main drain line, and (ii) an output connectable to either a gray water drain line or a black water drain line; and

upon detecting water flow from one or more of the black water sources, switching the outlet of the collection valve to, or retaining the outlet of the collection valve in the position of the black water drain line.

21. The method of claim 20, further comprising:

detecting water flow into the collection valve;

transmitting a water flow event signal responsive to the detection of water flow into the collection valve; and

receiving the water flow event signal,

wherein, responsive to the reception of the water flow event signal, and wherein a black water event signal has not been received, the outlet of the collection valve switches to, or remains connected to, the gray water drain line.

22. The method of claim 20, further comprising:

detecting water flow from one or more of the gray water sources;

transmitting a gray water flow event signal responsive to the detection of a gray water; and

receiving the gray water event signal,

wherein, responsive to the reception of the gray water event signal, and wherein a black water event signal has not been received, the outlet of the collection valve switches to, or remains connected to, the gray water drain line.